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EXAMINER

FELTON, MICHAEL J

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1731

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/618,096	Applicant(s) HAMPL ET AL.	
	Examiner Michael J. Felton	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-9,12,13,16-27,31-37,39-45,49-56,58-61 and 64-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,12,13,16-27,31-37,39-45,49-56,58-61 and 64-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 4-9, 12, 13, 16-27, 31-37, 39-45, 49-56, 58-61, and 64-70 are rejected under 35 U.S.C. 112 first paragraph.
3. Claims 1, 6, 16-21, 23-26, 27, 32-35, 49, and 50-56 are rejected as based on a disclosure which is not enabling. There is no indication of the size, weight, or what type of the smoking article being claimed which is critical or essential to the practice of the invention as claimed, but not included in the claim(s) and is not enabled by the disclosure. In particular, the claim is broad in scope (smoking articles), the nature of the invention is a specific end point of a gas product of the apparatus, but the inventor does not provide any direction as to how the end point is to be attained. Testing details are provided, but only indicate the amount of cigarette left unconsumed at the end of the test, but critical details such as the dimensions, weight, amount of tobacco, or if standardized cigarettes were used in the testing, cannot be found. One of ordinary skill in the art would not know what size and type of smoking article to test to determine if a smoking article met the claimed invention. For instance, one of ordinary skill could reduce the size of the smoking article and reach a reduced carbon monoxide output as measured per smoking article. Because no variable for experimentation is suggested,

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one would be open to vary a infinite number of variables (size, tobacco amount, tobacco source, filter, filter ingredients, wrapper, etc) to obtain the final output of carbon monoxide. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

4. Claims 1, 6, 16-21, 23-26, 27, 32-35, 49, and 50-56 are rejected because the specification, while being enabling for a cigarette, does not reasonably provide enablement for a smoking article. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. The instant claims describe a smoking article in terms of the results of testing, the conditions of which are described in the specification. However, the testing conditions are only described for one type of smoking article, a cigarette, with no information about other smoking articles such as cigars and cigarillos.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 6, 16-21, 23-26, 27, 32-35, 49, and 50-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase, "in an amount sufficient to reduce carbon monoxide delivery in mg per smoking article by at least X%" or "...has an average carbon monoxide delivery per puff of less than about Y mg," or "...the carbon monoxide to tar ratio of the smoking article is reduced by at least Z%", or other variations of this language, do not particularly point out how the smoking article is to be modified to reach the stated goal.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
8. Claims 1, 4-9, 12, 16-21, and 23-26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewton (US 2,003,690) in view of Heim et al. (US 4,193,412).
9. Regarding claim 1, Lewton discloses the using iron pigments that contain hydrated ferric oxide to control carbon monoxide as a cigarette additive and reducing the carbon monoxide by 30% (page 2, col. 2, 20-25). Heim et al. disclose the use of metal oxides, oxyhydrates, and hydroxides to treat the toxic substances found in cigarette smoke (col. 1, 41-51; col. 2, 3-12). Hydrated ferric oxide is a metal oxyhydrate. Heim et al. disclose using 10% by weight of tobacco, as well as using the compound in the filter at 3% by weight of the filter. Each of these percentages would be higher when compared to the weight of the wrapper (which is lighter than the tobacco or filter). It would have been obvious to one of ordinary skill in the art at the time of invention to use the hydrated ferric oxide of Lewton in the amounts specified by Heim et al., because Heim et al. teaches the use of metal oxyhydrates in general, of which hydrated ferric oxide is one example.
10. Claim 1 recites the function language, "in an amount sufficient to reduce carbon monoxide delivery in mg per smoking article by at least 10%." A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the

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prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

11. Regarding claim 4, Heim et al. disclose using metal oxide hydrate with a particle size of 300nm. It would be obvious to use ferric oxide hydrate with a similar size range. Particle size, and the related parameter of surface area lack criticality. Heim et al. states, "reduction of toxic components, in the tobacco smoke is not attributable to an especially high or especially low specific surface of the used additives..." (col. 6, 31-36). The applicant also indicates the lack of criticality, stating, "In general, the particle size of the carbon monoxide reducing agent is not believed to be critical," (page 11, 24-30).

12. Regarding claim 5, Heim et al. disclose using 10% by weight of tobacco, as well as using the compound in the filter at 3% by weight of the filter. Each of these percentages would be higher when compared to the weight of the wrapper (which is lighter than the tobacco or filter).

13. Regarding claim 7-9 and 12, it is notoriously well known that cigarettes can be made using tobacco filler, reconstituted tobacco, or reconstituted tobacco sheets surrounding tobacco filler. It would have been obvious that any additive for cigarettes could be used in any of these typical cigarette embodiments.

14. Claims 27, 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewton (US 2,003,690) in view of Heim et al. (US 4,193,412).

15. Regarding claim 27, Lewton discloses the using iron pigments that contain hydrated ferric oxide to control carbon monoxide as a cigarette additive and reducing

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the carbon monoxide by 30% (page 2, col. 2, 20-25). Heim et al. disclose the use of metal oxides, oxyhydrates, and hydroxides to treat the toxic substances found in cigarette smoke (col. 1, 41-51; col. 2, 3-12). Hydrated ferric oxide is a metal oxyhydrate. Heim et al. disclose using 10% by weight of tobacco, as well as using the compound in the filter at 3% by weight of the filter. Each of these percentages would be higher when compared to the weight of the wrapper (which is lighter than the tobacco or filter). It would have been obvious to one of ordinary skill in the art at the time of invention to use the hydrated ferric oxide of Lewton in the amounts specified by Heim et al., because Heim et al. teaches the use of metal oxyhydrates in general, of which hydrated ferric oxide is one example.

16. Heim et al. disclose changing the amounts of additives to obtain different reductions in gaseous components of cigarettes and Lewton discloses a 30% reduction of carbon monoxide output from a cigarette. It would have been obvious to reduce the amount of carbon monoxide output from a smoking article to a point lower than 15 mg per smoking article, or a carbon monoxide to tar ratio less than 1.0.

17. Claim 27 recites the function language, "in an amount sufficient to reduce carbon monoxide delivery in mg per smoking article by at least 10%." A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

18. Regarding claim 31, Heim et al. disclose using 10% by weight of tobacco, as well as using the compound in the filter at 3% by weight of the filter. Each of these percentages would be higher when compared to the weight of the wrapper (which is lighter than the tobacco or filter).

19. Regarding claims 32-35, the prior art, as disclosed by Heim et al. and Lewton reduce the carbon monoxide output of the cigarette during smoking. Because there is no patentable difference between the prior art and what is claimed in claim 1, the inventions of Heim et al. and Lewton would inherently reduce the carbon dioxide delivery to the amounts claimed, as they are within the scope of claim 1 and specify no structural limitation different than that of Heim et al. and Lewton.

20. Claims 32-35 recite only the function language, "wherein the smoking article has a carbon monoxide delivery of less than about X" or "wherein the smoking article has an average carbon monoxide delivery per puff of less than about Y." A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

21. Regarding claims 32-35, it would have been obvious to change the amount of carbon monoxide reducing material to obtain various amounts of carbon monoxide because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA). In addition, Heim et al. disclose changing the amounts of additives to

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obtain different reductions in gaseous components of cigarettes and Lewton discloses a 30% reduction of carbon monoxide output from a cigarette.

22. Regarding claim 37, 40, and 41, it is notoriously well known that cigarettes can be made using tobacco filler, reconstituted tobacco, or reconstituted tobacco sheets surrounding tobacco filler. It would have been obvious that any additive for cigarettes could be used in any of these typical cigarette embodiments.

23. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewton (US 2,003,690) and Heim et al. (US 4,193,412) as applied to claim 1 and 27 above. Lewton and Heim et al. do not disclose the process step of incorporating a carbon monoxide reducing agent into a cigarette, however, this process is inherently performed to make the product of either Lewton or Heim et al. as both contain a carbon monoxide reducing agent that was not part of the typical cigarette ingredients. The product limitations in claim 45 are the same as the limitations in claim 27, which was rejected as obvious over Lewton and Heim et al.

24. Claims 22, 36, 49-56, 58, 60, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewton (US 2,003,690) in view of Heim et al. (US 4,193,412) and Hampl, Jr. (US 4,793,775).

25. Regarding claims 22, 36, and 49, Lewton discloses the using iron pigments that contain hydrated ferric oxide to control carbon monoxide as a cigarette additive and reducing the carbon monoxide by 30% (page 2, col. 2, 20-25). Heim et al. disclose the

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use of metal oxides, oxyhydrates, and hydroxides to treat the toxic substances found in cigarette smoke (col. 1, 41-51; col. 2, 3-12). Hydrated ferric oxide is a metal oxyhydrate. Heim et al. disclose using 10% by weight of tobacco, as well as using the compound in the filter at 3% by weight of the filter. Each of these percentages would be higher when compared to the weight of the wrapper (which is lighter than the tobacco or filter). It would have been obvious to one of ordinary skill in the art at the time of invention to use the hydrated ferric oxide of Lewton in the amounts specified by Heim et al., because Heim et al. teaches the use of metal oxyhydrates in general, of which hydrated ferric oxide is one example.

26. Heim et al. disclose changing the amounts of additives to obtain different reductions in gaseous components of cigarettes and Lewton discloses a 30% reduction of carbon monoxide output from a cigarette. It would have been obvious to reduce the amount of carbon monoxide output from a smoking article to a point lower than 15 mg per smoking article, or a carbon monoxide to tar ratio less than 1.0.

27. Claim 1 recites the function language, "in an amount sufficient to reduce carbon monoxide delivery in mg per smoking article by at least 10%." A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

28. Lewton and Heim et al. do not disclose details of the wrapper, however, wrappers with areas of lower permeability are well known in the art. Hampl Jr. discloses

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a wrapper with lower permeability areas with a BMI of $0-4 \text{ cm}^{-1}$. It would have been obvious to one of ordinary skill in the art at the time of invention to use the wrapper of Hampl Jr. with the inventions of Heim et al. and Lewton because Heim et al. and Lewton use wrappers (as do all cigarettes) and the disclosure of Hampl Jr. would make cigarettes safer for users by reducing the likelihood of starting accidental fires.

29. Regarding claims 50-56, the prior art, as disclosed by Heim et al. and Lewton reduce the carbon monoxide output of the cigarette during smoking. Because there is no patentable difference between the prior art and what is claimed in claim 1, the inventions of Heim et al. and Lewton would inherently reduce the carbon dioxide delivery to the amounts claimed, as they are within the scope of claim 1 and specify no structural limitation different than that of Heim et al. and Lewton.

30. Claims 50-56 recite only the function language, "wherein the smoking article has a carbon monoxide delivery of less than about X" or "wherein the smoking article has an average carbon monoxide delivery per puff of less than about Y." A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

31. Regarding claims 50-56, it would have been obvious to change the amount of carbon monoxide reducing material to obtain various amounts of carbon monoxide because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ

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215 (CCPA). In addition, Heim et al. disclose changing the amounts of additives to obtain different reductions in gaseous components of cigarettes and Lewton discloses a 30% reduction of carbon monoxide output from a cigarette.

32. Regarding claim 58, Heim et al. disclose using 10% by weight of tobacco, as well as using the compound in the filter at 3% by weight of the filter. Each of these percentages would be higher when compared to the weight of the wrapper (which is lighter than the tobacco or filter).

33. Regarding claims 60 and 61, it is notoriously well known that cigarettes can be made using tobacco filler, reconstituted tobacco, or reconstituted tobacco sheets surrounding tobacco filler. It would have been obvious that any additive for cigarettes could be used in any of these typical cigarette embodiments.

34. Regarding claims 64-67, 69, and 70. Hampl Jr. discloses lower permeability ($0-4 \text{ cm}^{-1} \text{ BMI}$) bands on the wrapper that are perpendicular or parallel to an axis on the cigarette (figure 1), where the bands are made with cellulosic compositions or pieces of fibrous web in association with the wrapper (col. 1, 53-68). Please note the phrase "an axis" does not indicate any particular axis (for instance the longitudinal axis) of the cigarette.

35. Claim 13 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewton (US 2,003,690) and Heim et al. (US 4,193,412) as applied to claim 1 and 27 above, in further view of Dixit (US 4,590,955). Neither Lewton nor Heim et al. disclose

adding CO controlling materials, including metal oxyhydrates to cigarette wrapping papers.

36. However, Dixit discloses producing a cigarette paper with reduced CO upon burning by producing the paper with an additive. It would have been obvious to one of ordinary skill in the art at the time of invention that combining a known CO controlling material (ferric oxide hydroxide) disclosed by Lewton and Heim et al. with the teaching of Dixit that CO can be controlled in the cigarette paper. The motivation to do so would be to reduce CO that reaches the smoker or others around them from combustion of the paper and tobacco within the cigarette as disclosed by Dixit, Lewton, and Heim et al.

37. Claims 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewton (US 2,003,690) and Heim et al. (US 4,193,412) as applied to claim 27 above, in further view of Mathews et al. (US 4,622,983). Lewton and Heim et al. do not disclose the wrapper porosity. Mathews et al. disclose in example 5, a wrapper with permeability of 55 cm/min (CORESTA), a basis weight of 24 grams per meter squared, and a filler of 30% calcium carbonate. It would have been obvious to one of ordinary skill in the art at the time of invention to use the wrapper of Mathews et al. to wrap the inventions of Lewton and Heim et al. as the inventions of Lewton and Heim et al. require wrappers.

38. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewton (US 2,003,690), Heim et al. (US 4,193,412), and Hampl, Jr. (US 4,793,775) as applied to claim 49 above, in further view of Mathews et al. (US 4,622,983). Lewton, Heim et al.,

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and Hampl Jr. do not disclose the wrapper porosity. Mathews et al disclose in example 5, a wrapper with permeability of 55 cm/min (CORESTA), a basis weight of 24 grams per meter squared, and a filler of 30% calcium carbonate. It would have been obvious to one of ordinary skill in the art at the time of invention to use the wrapper of Mathews et al. to wrap the inventions of Lewton and Heim et al. as the inventions of Lewton and Heim et al. require wrappers:

39. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewton (US 2,003,690), Heim et al. (US 4,193,412) and Hampl, Jr. (US 4,793,775) as applied to claim 64 above in further of Hotaling et al. (US 5,820,998 and EP 671505 A). Lewton, Heim et al. and Hampl Jr. do not disclose a film based lower permeability area, however, Hotaling et al. disclose a polymer coating (film) coating a paper to reduce permeability of the paper (abstract). It would have been obvious to one of ordinary skill in the art at the time of invention to use the coating of Hotaling et al. to construct bands to provide self-extinguishing capability to the cigarettes of Lewton, Heim et al., and Hampl Jr. because self-extinguishing capabilities make cigarettes safer.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Felton whose telephone number is 571-272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJF


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